

COTTON CHATS

FROM

DRAPER COMPANY

SHIPMAN'S COMMON-SENSE BINDER

PATENTED

JANUARY 19, 1892.

APRIL 19, 1904

To open binder, remove the slides from fasteners raise the fasteners to an erect position and then file papers. For punching: lay the papers on covers and mark sheets to correspond with fasteners.

IF DUPLICATE is
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25981

ASA L. SHIPMAN'S SONS
MANUFACTURERS,
NEW YORK.



COTTON CHATS

By the Secretary of the
DRAPER COMPANY,
HOPEDALE, MASS.

No. 16. MARCH, 1903.

THE Directors of the DRAPER COMPANY deem it fitting to have inscribed in their permanent records the following statements, called forth by the death of their late fellow member, CHARLES M. DAY.

MR. DAY became an employee of the Hopedale Machine Company, (one of the companies merged into the Draper Company at its formation) in his youth. He served a three years' apprenticeship. Afterwards he worked in several other shops, notably in the Pratt & Whitney shops of Hartford, Ct., and the Brown & Sharpe shops at Providence, R. I., and returning here, became foreman of the tool-making department. He later became foreman of the spindle-making department (then the most important department in the company's works) and was still later appointed superintendent. On the formation of the Draper Company he was appointed General Superintendent, which position he held until the time of his death; and was also a member of the board of directors of the company. He has filled every position referred to, to the entire satisfaction of his employers and associates.

MR. DAY'S connection with the board of directors was a more intimate one than that of mere business relations. He was a friend of every member of the board, and an associate of whom we were all proud. He was an honest, able, strong man. In his death we feel that we have met a personal as well as a business loss.

WE must also chronicle another serious loss to our associate company, the BRITISH NORTHROP LOOM COMPANY, LIMITED, whose general manager, MR. WILLIAM LIVESEY, died of acute pneumonia, very suddenly, February 15. Although the acquaintance is of short standing, we feel a keen personal bereavement in this sudden disaster, in common with his world wide circle of friends.

THE WEAVERS PREFER THEM.

One of the very best overseers of weaving in the country running Northrop looms made a casual observation to one of our representatives recently, which impresses us as being important. We quote from the report of our representative:

"I spent considerable time in going through the looms that have been running the longest, and find them running as well, if not better, than ever before. The overseer tells me they are getting about 94 per cent. of the product, and his help is all family help. He also stated that if one of his weavers goes away to work on the common loom he is not gone more than a month before he wants to get back. I find this to be so in other places also. Once let a good weaver get used to Northrop looms and he never wants to run common looms again."

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CONCERNING MR. PICKLES.

Among the various versatile Englishmen now writing for the daily press on the subject of Northrop looms, Mr. Thomas Pickles, of the Cairo Mills, Burnley, England, is prominent for pessimism. The objections raised by this gentleman at this late date are rather curious, in that they show grave doubt and apprehension about the success of a mechanism which has already been in public use for eight years, and which is breaking all records for loom sales in our own country.

Mr. Pickles states positively that with 40s to 100s weft the Northrop loom could not compete at all; without, however, going into detail in backing up this surprising statement. He also argues from theory that the quick operation of the parts in changing the weft on the Northrop loom will cause a great amount of damage and broken castings, and that our feeler motion can only act properly when the loom is picking uniformly. Of course, these assertions cannot out argue the actual facts which can easily be determined by an investigation of looms now running. He also fears the slot in the shuttle will have a tendency to break down warp threads, although he might easily determine the fact that no such possibility occurs in actual practice.

He dismisses the subject of warp-stop motions with the broad assertion that if good yarn is used they are unnecessary, and that with bad yarn a loom equipped with them could scarcely run at all.

He seems to doubt the advantage of the new loom, even if it were sold at the same price as the common loom. The fact that a weaver can run 16, or even more, looms on the same goods that would limit a weaver to four looms in England, does not appear to him to be even worthy remark. He refers to the Northrop loom taking more power, as if that were a necessary fact, although the additional exertion required for the changing of filling takes but 1-6 of a second, according to his own statement, at intervals of several moments.

This first effort of Mr. Pickles stirred up courage in another inquirer, who, among other questions, asks: "*What is the reason of the exorbitant cost of the Northrop loom, seeing that the extra machinery for changing the cop is neither complicated nor numerous.*" We should answer briefly if this question were directed for us, that the cost is based on the value given, the same as any other commodity. Were the looms not worth much more than we asked for them as profit making investments, we certainly could not have built up our present tremendous trade. Another question asked is: "*If the Northrop loom is so far superior to all other inventions having the object of changing the cop or shuttle automatically, how is it that the Northrop Company are constantly buying up new inventions that are likely to compete with it,* If the gentleman were better acquainted with the intricacies of patent law, he might understand why it is necessary, or rather advisable, to protect the foundation patents by purchase of other patents on similar mechanism. It hardly seems necessary to go into this question exhaustively, in view of the common knowledge on the subject. He again asks: "*Is it true that the Northrop Company some time ago offered a large sum for the patent rights of a competing shuttle-changing-motion by an English inventor, and which was refused?*" We can answer this simply by saying, It is **not** true. Other questions in this letter have been answered in other of our public statements.

Mr. Pickles again comes to the front with an argument explaining why our feeler motion cannot act, and is therefore merely an incumbrance. It is unfortunate that Mr. Pickles is not near enough at hand so that we might show him the many thousand of such feelers which **do** act.

Mr. Pickles asks with some concern about the action of Northrop looms after a few years' use, when worn parts come into evidence and the lay settles, or the crank arm gets loose. Of course, we have only to point to the actual fact of thousands of looms running a great many years, and needing very little attention in the way of adjustment, which is simply made when necessary.

His question as to the action of our feeler device with a loose crank arm comes very pertinently, as we have just perfected a mechanism which acts irrespective of any such looseness; and which will, in fact, allow a looseness of the crank arm of one quarter of an inch without affecting its operation.

He asks how many men, apart from weavers, will be needed to supervise say 50 looms. As a matter of fact, one extra man often supplies the extra labor for 100 or more Northrop looms. The manufacturers he refers to, who change their weft many times in a week, would certainly find objections to the introduction of the Northrop loom, although the objections are by no means insurmountable. Proper system of manufacture will evidently confine certain mills to distinct classes, thus economizing in every branch of production. We accept Mr. Pickles' decision that with all its faults the Northrop loom is the best of its kind, but we do not understand why he has so persistently avoided any consideration whatever of the apparent fact that the saving in cost of production of cloth on the Northrop loom will not only offset all of the possible minor disadvantages, but leave a handsome surplus after paying all expenses, including interest on the extra investment. From our understanding of the conditions of the English cotton trade, we were inclined to think that any process by which mill profits could be increased should be warmly welcomed. With weavers limited to 4 looms and possibly employing helpers at that, the labor cost per loom per year must be considerably over \$75.00, or 15 pounds in their money. Weavers average to earn about \$300.00 per year in England. There are many Northrop loom mills in the United States where the wages are under \$20 per loom per year, or 4 pounds. Surely a possible difference of \$55, or 11 pounds per year, gives plenty of leeway for a little extra cost in the way of supplies and interest. A few months of profit at this rate will soon pay the entire additional cost of the Northrop loom; yet this remarkable possibility has, for some reason, failed to excite the slightest interest in Mr. Pickles and his associates.



No. 17. APRIL, 1903.

WHAT HAPPENED IN APRIL 128 YEARS AGO.

Lexington, April 25th, 1775.

I, William Draper, of lawful age and an inhabitant of Colrain in the county of Hampshire, and Colony of Massachusetts-Bay in New-England, do testify and declare, that being on the parade of said Lexington, April 19th instant, about half an hour before sunrise the Kings regular troops appeared at the meeting house of Lexington. Capt. Parker's company who were drawn up back of said meeting house on the parade turned from said troops making their escape by dispersing, in the mean time, the regular troops made an huzza and ran towards Capt. Parker's company who were dispersing, and immediately after the huzza was made, the commanding officer of said troops (as I took him) gave the command to the said troops "fire! fire! damn you fire!" And immediately they fired before any of Capt. Parker's company fired, I then being within three or four rods of said regular troops: And further say not.

WILLIAM DRAPER.

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THE FUTURE OUTLOOK.

According to the census reports, there were in 1900 about 450,000 cotton looms running in this country alone. Of these, it is estimated that the looms to which filling-changing devices are not readily adapted, such as box looms,

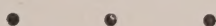
narrow ware looms, and special fancy looms, would amount to about 75,000, leaving 375,000 as the open field for the introduction of our Northrop filling-changing mechanism. Of course, the other looms offer an opportunity for the use of warp-stop motions without the filling-changer, which we have already accepted to a considerable extent. This number of 375,000 was undoubtedly increased to at least 415,000 Jan. 1st, 1903. Of this number, over 65,000 then running were complete Northrop looms, representing our output as introduced in this country alone for a period of the past 8 years. This leaves us a working leeway of about 350,000 looms to be replaced here, and if cotton manufacturing increases at the same rate that it did during the 10 years preceding 1900, this number would become at least 490,000 by 1910. It would thus take an output of over 60,000 looms per year to accomplish the feat of replacement before the next census figures are taken. We are at present averaging to ship looms at the rate of over 2,000 per month, or at least 25,000 per year. We are, however, doubling our foundry capacity, and can easily attend to a much larger demand. Should we, however, succeed in replacing all the present looms within the next eight years, the normal demand for new looms, if judged by past records, would force a serious drop in our production, as the total yearly increase in this class of weaving, reckoning by past standards, would be under 20,000 per year at that time. We shall, therefore, be content to have certain old loom replacement delayed to keep our production uniform, and shall not, therefore, invite orders at present at a rate of over 40,000 per year, at least.

While this preceding reckoning may be viewed by many in a humorous light, it is by no means outside the possibilities. According to the logic of the situation the owners of the whole 350,000 common looms now waiting replacement should enter their orders unanimously, as they are losing a possible profit on every old loom which they now run. It is all very well so long as demand keeps prices fairly high, but what must they face with high priced cotton in prospect, labor clamoring for higher wages, and supplies of every kind at the maximum of cost. Even the most stringent economy will not assist where economy has already been systematized to a fine point. The only way to meet the coming conditions is by radical reduction in cost of production, and the Northrop loom offers the most rational method now open to the trade.

In case of an old mill, this necessarily means a large in-

vestment of capital, to be drawn from surplus, or borrowed, or obtained by assessment, or issue of new stock; and yet with all the difficulties attending this course, it would seem far better to meet the exigency promptly, rather than allow things to run from bad to worse, requiring the slashing reduction in old capitalization which is becoming such a notable feature in cotton mill reorganization.

We have been harping in this same strain for many years, and no doubt many of our friends are wearied with its repetition; yet the facts demand this style of treatment, and we trust that the future course of the mills themselves will obviate the necessity for further argument of this nature.



NORTHROP LOOM PROFITS.

It is not often that a manufacturer will personally admit the extent of his profits by use of the Northrop loom. Recently, however, it became necessary for such a manufacturer to file an affidavit, which, being a matter of public record, we quote in part, although withholding the name for the present. In referring to a large number of looms running with Northrop attachments, the affidavit states as follows:

“This mill is one of the most modern in this country so far as equipment is concerned. The average pay of the weavers who attend to these looms (common) that weave such goods is nine dollars a week. Each weaver takes care of four looms. The average production of each of these looms is twenty-four yards or twelve pounds of such goods per day. This would be one hundred and forty-four yards or seventy-two pounds per loom a week, making five hundred and seventy-six yards or two hundred and eighty-eight pounds of such goods a week for the four looms taken care of by each weaver. This is the only mill of which I have knowledge where the weaver can take care on an average of as many as four looms.” (On this style of goods.)

“The cost of manufacture of such goods for the wages of the weaver only is about 3.12 cents per pound. With less improved looms for producing such goods, of

which many are in use, the cost is greater as a weaver cannot take care of so many looms."

The affidavit then states that the use of our devices on these goods increases the production to 38 yards per loom, or 19 pounds of such goods a day. As a weaver attends six looms of the new style, the production per day per weaver is 228 yards, or 114 pounds of such goods. The cost per pound is about 1.31 cents, or a saving per loom per year of over \$100 each. The affidavit states that the profits from such looms will be about 9 per cent. on the entire cost of the plant, including carding and spinning machinery, and if the plant were to consist solely of looms, the saving would pay a dividend of about 19 per cent on the cost. The affidavit also calls attention to the greater product per loom as requiring less looms, less floor space, etc. In fact 100 looms at this ratio of product would do the work of 158 common looms. On this basis the saving in number of looms and floor space would possibly pay for the entire cost of the attachments as these are one of the most expensive type of loom built.

Of course, it is evident that this is a peculiar class of weaving, inasmuch as the weaver only changes from four looms to six; yet the greatly increased product shows that the weavers on six looms are producing more than twice as much cloth per weaver compared with the common loom product. This affidavit was not made with the intent of aiding us in any way by its information; in fact we only ran across it by accident.



LITIGATION.

Having recently discovered that the N. A. Lombard Company of Worcester had put out molding machines infringing our Day and Anderson patent No. 714,285, we brought suit against that company and its officers E. H. Ingram and J. J. Wehinger in the Circuit Court of the United States for the District of Massachusetts. Our counsel made a motion for a preliminary injunction; and on March 30, such an injunction was ordered by Judge Colt, enjoining the defendants from making, using or selling any molding machines infringing any one of the eight claims of our patent.

COTTON CHATS

By the Secretary of the
DRAPER COMPANY,
HOPEDALE, MASS.

No. 18. MAY, 1903.



THE OLD HOUSE.

Curiously enough, our trade literature has never yet included any illustration of or reference to the original building which formerly occupied a part of our present manufacturing site. The dwelling shown in the above illustration was built about 1700 by John Jones, of the neighboring town of Mendon, it being the first building erected in all the territory now occupied by the towns of Milford and Hopedale. Although our shops cover part of the site, one of the three elm trees shown is still standing. It was in this house, March 24, 1842, that the first meeting of the Hopedale community was held, and the families forming the nucleus of that organization occupied the dwelling while their various new habitations were in process of erection. It was demolished in 1874, being then in an unsafe condition. Although it is quite possible that the founders of our present business would have worked out a similar conclusion irrespective of

locality, it is certainly true that the choice of this situation; and the presence of the original building, were important factors in the development of events which brought the men who built the works now standing.



A HOPPER IMPROVEMENT.

When we changed the size of our hopper, we incorporated several new features, including a hinged support for the butt end of the bobbin in place of the long, curved, flat spring on the original hopper. We regret to have found that these castings are quite liable to break under the repeated hammering which the reaction the of spring gives them. An exhaustive test has shown us that with a strengthened casting and the insertion of a leather washer to prevent the blow of metal on metal, this difficulty seems to be completely overcome, and we have equipped our recent shipments of looms with this combination. We believe it would be for the interests of all parties owning looms with our large hopper to take off the present supports and replace them with this pattern before they do break, as breakage may involve damage to other parts of the mechanism. The cut is self-explanatory.

NEW TWISTER SPINDLE.



Since adopting the taper bearing and screw-step adjustment for our twister spindles we have run into a difficulty which prompted a change. The pins, which locked the step and bolster were apt to loosen and leak oil providing the step or bolster were jammed down on them with the slots out of line.

We now furnish a construction in which no pins are used at all so that leaky bases are a thing of the past. The bolster is locked in the case by a long key holding in a slot, and the step is held in place by a spring connection which can be easily changed in position for adjustment of the bearing fit. The spring has no function as such while the spindle is running. We have quite a number of these spindles now in use giving excellent satisfaction.

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CAN THIS BE EQUALLED?

One of our travelling men reported as follows during April, concerning a well known corporation:

"In No. 1 mill I saw one room with 216 looms in it being run by six weavers. These weavers run 36 looms each, cotton harness and double-thread stop-motion. The goods are 80x88 25s warp 33s filling. Four boys fill the batteries for this room, and they are getting as much product as when the weavers ran 24 looms each and filled their own batteries. The overseer says he expects to get a larger product than before. The weavers like this arrangement better than the former one. The overseer told me that the weavers tell him that filling the batteries is more than half of their work."

After General Draper's paper on the recent improvements in the Northrop Loom a well known manufacturer spoke to him as follows:

"General, I don't run any of your looms yet, but I believe every word you say about them."

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TEXTILE TEXTS.

Owing to an unprecedented demand the 1901 edition of our catalogue is completely exhausted. We shall reprint it as soon as it is possible to prepare the new matter and illustrations. This will take several months, and meanwhile those who send in their names will be put on a list prepared for that purpose. Those who are not customers and use the books for the rules and other standard information contained will not need copies of this second edition if they already have the first.



